WHAT IS CLAIMED IS:

5   1.   A file processing unit comprising:
           a first signature information producing
unit that produces first signature information, in
response to a close request to close a file, using
10 the data of the file in accordance with a
predetermined rule, the file being used in an
application that is run in a computer system; and
           a signature information storage control
unit that correlates the first signature information
15 with the file designated by the close request, and
stores the first signature information in a storage
unit.

20

           2.   The file processing unit as claimed in
claim 1, wherein the first signature information
producing unit has a close-file reading unit that
25 reads the data of the designated file from the
storage device, so that the first signature
information is produced using the data read out by
the close-file reading unit.

30

           3.   The file processing unit as claimed in
claim 1, wherein the signature information storage
35 control unit has a signature information attaching
unit that attaches the first signature information
to the file designated by the close request, so that

the first signature information and the designated
file are collectively stored in the storage unit.

5

     4.   The file processing unit as claimed in
claim 1, further comprising a signature attachment
determining unit that determines whether signature

10 information should be attached to the file
designated by the close request when the close
request is issued,
     wherein, when the signature attachment
determining unit determines that signature

15 information should be attached to the file
designated by the close request, the first signature
information producing unit produces the first
signature information.

20

     5.   The file processing unit as claimed in
claim 4, further comprising a mode setting unit that

25 sets a processing mode for attaching signature
information at least to the file designated by the
close request before the file is used in the
application,
     wherein the signature attachment

30 determining unit that determines whether signature
information should be attached to the file
designated by the close request in accordance with
the processing mode preset by the mode setting unit.

35

6. The file processing unit as claimed in claim 1, further comprising:

a second signature information producing unit that produces second signature information in response to an open request to open the file to be used in the application, using the data of the file in accordance with the predetermined rule;

a signature agreement determining unit that determines whether the first signature information attached to the file designated by the open request is identical to the second signature information; and

a determination result producing unit that produces information representing a determination result of the signature agreement determining unit, the information being supplied to the application.

7. The file processing unit as claimed in claim 6, wherein the second signature information producing unit has an open-file reading unit that reads the data of the file designated by the open request from the storage unit before a process requested by the open request is completed, so that the second signature information is produced using the data read out by the open-file reading unit.

8. The file processing unit as claimed in claim 6, further comprising a signature check determination unit that determines whether the first signature information attached to the file designated by the open request and stored in the

storage unit should be checked when the open request
is issued,

        wherein, when the signature check
determining unit determines that the first signature

5   information attached to the file designated by the
open request and stored in the storage unit should
be checked, the second signature information
producing unit produces the second signature
information to be compared with the first signature

10   information.

15   9. The file processing unit as claimed in
claim 8, wherein the signature check determining
unit comprises:

        a mode setting unit that sets a processing
mode for checking at least the first signature

20   information attached to the file designated by an
open request before the file is used in the
application; and

        a mode determining unit that determines
whether the first signature information attached to

25   the file designated by the open request and stored
in the storage unit should be checked, in accordance
with the processing mode preset by the mode setting
unit.

30

        10. A file processing unit comprising:
        a second signature information producing

35   unit that produces second signature information, in
response to an open request to open a file, using
the data of the file in accordance with a

predetermined rule, the file being used by an
application that is run in a computer system;

a signature agreement determining unit
that determines whether the second signature

5   information is identical to first signature
information produced utilizing the data of the file
designated by the open request and stored, attached
to the designated file, in a storage unit; and

a determination result producing unit that

10   produces information representing a determination
result of the signature agreement determining unit,
the information being supplied to the application.

15

11.   The file processing unit as claimed
in claim 10, wherein the second signature
information producing unit has an open-file reading

20   unit that reads the data of the file designated by
the open request from the storage unit before a
process requested by the open request, so that the
second signature information is produced using the
data read out by the open-file reading unit.

25

12.   The file processing unit as claimed

30   in claim 10, further comprising a signature check
determining unit that determines whether the first
signature information attached to the file
designated by the open request and stored in the
storage unit should be checked when the open request

35   is issued,

wherein, when the signature check
determining unit determines that the first signature

information attached to the file designated by the
open request and stored in the storage unit should
be checked, the second signature producing unit
produces the second signature information to be
5 compared with the first signature information.

10   13. The file processing unit as claimed
in claim 12, wherein the signature check determining
unit comprises:
          a mode setting unit that sets a processing
mode for checking at least the first signature
15 information attached to the file designated by the
open request before the file is used in an
application; and
          a mode determining unit that determines
whether the first signature information attached to
20 the file designated by the open request and stored
in the storage unit should be checked, in accordance
with the processing mode preset by the mode setting
unit.

25

          14. A file processing unit that is
applied to a computer system having a file system
30 that performs processes on a file based on an event
issued from an application, said file processing
unit comprising:
          a first signature information producing
unit that produces first signature information in
35 accordance with a predetermined rule using the data
of the file designated by a file close event issued
from the application, before the process specified

by the file close event is completed in the file system;

a signature information storage control unit that attaches the first signature information to the file designated by the file close event, and stores the first signature information in a storage unit; and

a first returning unit that performs, after the first signature information is produced, a process for returning to the process for the file specified by the file close event in the file system.

25. A file processing unit that is applied to a computer system having a file system that performs processes on a file based on an event issued from an application, said file processing unit comprising:

a second signature information producing unit that produces second signature information in accordance with a predetermined rule using the data of the file designated by a file open event issued from the application, before the process specified by the file open event is completed in the file system;

a signature agreement determining unit that determines whether the second signature information is identical to first signature information produced in accordance with the predetermined rule using the data of the file designated by the file open event and stored, together with the designated file, in a storage unit;

a determination result producing unit that produces information representing a determination

result of the signature agreement determining unit, the information being supplied to the application; and

5   a second returning unit that passes the information representing the determination result to the file system, and performs a process for returning to the process for the file specified by the file open event in the file system.

10

16.   A file processing unit comprising:
        a first signature information producing

15 unit that produces first signature information, in response to a close request to close a file, using the data of the file in accordance with a predetermined rule, the file being used in an application that is run in a computer system; and

20   a signature information storage control unit that correlates the first signature information with the file designated by the close request, and stores the first signature information in a storage unit,

25   the file processing unit functioning as an external unit connected to the computer system.

30

        17.   The file processing unit as claimed in claim 16, wherein the external unit is constituted by a PC card.